MassDEP Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs
Department of Environmental Protection
Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

DEVAL L. PATRICK
Governor

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Secretary

KENNETH L. KIMMELL
Commissioner

August 5, 2013

Mr. Michael Buell
Wright Architectural Millwork
115 Industrial Drive
Northampton, MA 01060

RE: NORTHAMPTON
Transmittal No.: X256489
Application No.: WE-13-021
Class: *Submin*
FMF No.: 133383
AIR QUALITY PLAN APPROVAL

Dear Mr. Buell:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the proposed construction and operation of an automated spray coating machine at your facility located at 115 Industrial Drive in Northampton, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

Wright Architectural Millwork ("Wright") proposes to construct and operate a Makor Model Q-ONE-1300 spray coating machine equipped with a single arm oscillating spray mechanism that will utilize four automated spray guns at their facility located at 115 Industrial Drive in Northampton, MA. The new automated spray coating machine will be used for wood products surface coating.

The Makor automated spray coating machine will be installed with COM-PLEAT PAF-90 accordion style and CHEMCO GPF Ultra Mesh, paint arrestor filters. The filters have a minimum rated particulate removal efficiency of 99%. The spraying machine paint booth will have a face velocity of below 200 feet per minute ("fpm"). The paint booth will discharge to a vertical exhaust stack 13 feet above roof level, at a height of 27 feet above grade, and exit at a minimum velocity of 2800 fpm.

The automated spray coating machine will utilize AVX Airmix Spray Guns with No. 9 Airmix tips which have an inside diameter of 0.013 inches and are capable of 15.2 ounces per minute of fluid output. The automated application results in minimal overspray with a transfer efficiency of 86%. The AVX Airmix Spray Gun has not been approved as equivalent to high volume low pressure ("HVLP") by MassDEP at this time, but it has been tested by the EPA's Environmental Technology and Verification Program ("ETV") and determined to be equivalent or better than HVLP.

All paint supply lines to the paint booth and the supply pump are cleaned daily by flushing the lines with solvent cleaner (Reducer 901). Supply lines are placed in a lidded container and the solvent is pumped through the lines and collected in a waste solvent container, also with a lid. Approximately one gallon of solvent is used per supply line flush and one flush per day is performed on all lines resulting in one gallon of solvent used each day. The spray guns are removed from the paint booth and placed in an enclosed cleaning machine (Astro Pneumatic Model 4530). Solvent is sprayed onto the guns inside the machine. Once cleaned, the parts are removed and mounted back on the coating machine. Approximately 260 gallons per year of the collected solvent from all cleaning processes is disposed of as waste.

Wright has proposed that the maximum emission from the automated spray coating machine, including cleanup operations, will not exceed 5.2 tons per year of VOCs and 2.6 tons per year of Hazardous Air Pollutants ("HAPs") based on a maximum coating VOC content of 5.15 pounds per gallon as applied, a maximum coating HAP content of 2.64 pounds per gallon as applied, and a maximum coating usage of 2000 gallons per year.

Facility-Wide Emission Rates

Wright has requested to establish a facility-wide emission limit of 9.9 tons of VOCs in any 12 consecutive month period and 6.9 tons of total HAPs in any 12 consecutive month period.

Regulatory Applicability

The automated spray coating machine (including cleanup operations) and any associated surface preparation are subject to the best available control technology (BACT) requirements of 310 CMR 7.02(8)(a)2. In lieu of a top-down BACT analysis, 310 CMR 7.02(8)(a)2.b. allows for the proposal of an emission control limitation using a combination of best management practices, pollution prevention and a limitation on the hours of operation and /or raw material usage which is only available if the proposed allowable emissions are less than 18 tons of VOCs per 12 consecutive month period, less than 18 tons of total organic material HAP and less than ten tons of a single organic material HAP. Wright will minimize VOC and HAP emissions from their operations by limiting the VOC and HAP contents of coatings/materials, limiting the usage of VOC and HAP-containing coatings/materials and implementing work practices which minimize the evaporation of VOCs and HAPs.

In addition to being subject to the BACT requirements of 310 CMR 7.02(8)(a)2., the automated spray coating machine (including cleanup operations) and the associated surface preparation are subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU#	Description	Design Capacity	Pollution Control Device (PCD)
EU 1	Makor Model: Q-ONE 1300 AVX Airmix Reciprocating Spraying Machine, including cleanup operations	18.9 gallons per hour (application rate)	Fabric Filter

Table 1 Key:
EU# = Emission Unit Number
PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2

EU#	Operational / Production Limit	Air Contaminant	Emission Limit
EU 1	1. 400 Gal./Month[1] & 2000 Gal./Year of coatings in a 12 consecutive month period. 2. Maximum VOC content of coating utilized by EU #1 shall not exceed 18.4 pounds VOC/Gal. solids as applied. 3. Maximum HAP content of coating utilized by EU#1 shall not exceed 2.64 pounds HAP/Gal. as applied.	VOC	1.0 TPM 5.2 TPY
		Total HAPs	0.5 TPM 2.6 TPY
		Opacity	0 Percent
Facility-wide	N/A	Total HAPs	1.4 TPM 6.9 TPY
		Total VOCs	2.0 TPM 9.9 TPY

Table 2 Key:
EU# = Emission Unit Number
Gal = gallons
VOC = Volatile Organic Compounds
HAPs = Hazardous Air Pollutants
TPM = tons per month
TPY = tons in any consecutive12-month period

Table 2 Notes:
[1] = Based on a peak month being 20% of annual

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3

EU#	Monitoring and Testing Requirements
EU 1	1. The Permittee shall monitor material usage on a monthly basis.
	2. The Permittee shall monitor VOC and HAPs content of each coating used.
	3. EU #1 shall be equipped with instrumentation to continuously monitor the pressure drop across the paint spray filters.
Facility-wide	4. If requested by MassDEP, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13.

Table 3 Key:
EU# = Emission Unit Number
VOC = Volatile Organic Compounds
HAPs (total) = total Hazardous Air Pollutants
CMR = Code of Massachusetts Regulations
MassDEP = Massachusetts Department of Environmental Protection
USEPA = United States Environmental Protection Agency

Table 4

EU#	Record Keeping Requirements
EU 1	1. The Permittee shall record the pressure drop across the paint spray filters associated with EU#1 at least once per day during which coating operations occur and record the acceptable limit of pressure drop as specified by the filter or spraying machine manufacturer.

Table 4	
EU#	**Record Keeping Requirements**
EU 1	2. The Permittee shall prepare and maintain sufficient records to demonstrate compliance for each calendar month. Such records shall include but are not limited to: a. For each coating as applied; 1) Gallons of coating used; 2) Coating density (pounds per gallon); 3) Pounds of VOC per gallon of coating; 4) Pounds of solids per gallon of coating; 5) Pounds of water per gallon of coating; 6) Pounds of other non-VOC liquid per gallon of coating; 7) Pounds of VOC per gallon of solids as applied; and 8) Pounds of total HAP per gallon of coating. b. Gallons of exempt/non-compliance coatings used; and c. Gallons of cleanup solution used and pounds VOC per gallon; and d. Maintenance records of filter pad replacement and disposal.
	3. The Permittee shall include all emissions associated with surface preparation and/or cleanup solutions in the monthly and 12 month rolling emissions calculations to determine the Permittee's compliance status with emission limits contained in Table 2 above.
	4. The Permittee shall maintain sufficient records to demonstrate the pounds of VOC and HAP emitted each month and in each 12 consecutive month period.
	5. The Permittee shall keep documentation of the particle control efficiency of the fabric filter material used in EU#1.
Facility-wide	6. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	7. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	8. The Permittee shall maintain a copy of this Plan Approval and the underlying Application for the EU(s) approved herein on-site.
	9. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.

Table 4	
EU#	**Record Keeping Requirements**
Facility-wide	10. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	11. Maintain records of facility operations such that information may be reported as required for compliance with 310 CMR 7.12.
	12. The Permittee shall maintain records required by this Plan Approval ***ON-SITE*** for a minimum of five (**5**) years.
	13. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:
EU# = Emission Unit Number
EU = Emission Units
MassDEP = Massachusetts Department of Environmental Protection
USEPA = United States Environmental Protection Agency

Table 5	
EU#	**Reporting Requirements**
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Western Regional Office of MassDEP, BWP Permit Chief by telephone ***(413) 755-2115***, email, Marc.Simpson@state.ma.us or fax (413) 784-1149, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP's request.
	4. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5	
EU#	**Reporting Requirements**
Facility-wide	5. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:
EU# = Emission Unit Number
CMR = Code of Massachusetts Regulations
MassDEP = Massachusetts Department of Environmental Protection
BWP = Bureau of Waste Prevention

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU#	**Special Terms and Conditions**
EU 1	1. All air pollution control system monitoring devices including, but not limited to, differential pressure gauges, pressure tap lines, flow rate meters, and chart recorders shall be maintained in good working order and calibrated in accordance with the manufacturers recommendations.
	2. EU#1 shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system as determined in writing by MassDEP and that achieves a particulate control efficiency of at least 99 percent (%) by weight. Filter material shall be disposed of in accordance with all applicable MassDEP regulations. In addition, the face velocity of air at each filter shall not exceed 200 feet per minute.
	3. For non-plastic surface preparation, prior to coating, the VOC content of any surface preparation solution shall not exceed 1.67 pounds per gallon. This requirement is not applicable to cleanup solutions which are re-used as thinners/reducers for coatings.
	4. Spray guns shall utilize the following method of spray application and be maintained or operated in accordance with the recommendations of the manufacturer: a. Airmix spray application with No. 9 (0.013inch diameter) spray tips; or b. Any other coating application method that achieves a transfer efficiency equivalent to electrostatic or HVLP spray application and is approved by MassDEP in writing.

Table 6	
EU#	**Special Terms and Conditions**
EU 1	5. Spray guns shall be cleaned in a device that: a. minimizes the solvent evaporation during the cleaning, rinsing, and draining operations; b. recirculates solvent during the cleaning operation so that the solvent is reused; and, c. collects spent solvent in a container with a tight-fitting cover so that it is available for proper disposal or recycling.
	6. Spraying operations shall not be conducted outside of the spray booth.
Facility-wide	7. The Permittee shall comply with the following work practices: a. Store all VOC and/or HAP-containing paints, primers, sealants, sealant primers, process-related waste materials, fresh and spent cleaning solvents and VOC and/or HAP-containing materials in closed containers; b. ensure that mixing and storage containers used for VOC and/or HAP-containing paints, primers, sealants, sealant primers, process-related waste materials, and VOC and/or HAP-containing materials are kept closed at all times except when depositing or removing these materials; c. minimize spills of VOC and/or HAP-containing paints, primers, sealants, sealant primers, process-related waste materials, and VOC and/or HAP-containing materials; d. convey VOC and/or HAP-containing paints, primers, sealants, sealant primers, process-related waste materials, and VOC and/or HAP-containing materials from one location to another in closed containers or pipes; e. minimize VOC and/or HAP emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that: (i) equipment cleaning is performed without atomizing the cleanup solvent; and, (ii) all spent solvent is captured in closed containers; and f. store and dispose of all absorbent materials, such as cloth or paper, that are contaminated with VOC and/or HAP-containing paints, primers, sealants, sealant primers, process-related waste materials, or VOC and/or HAP-containing materials in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container.
	8. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:
EU# = Emission Unit Number
VOC = Volatile Organic Compounds
HAPs (total) = total Hazardous Air Pollutants
CMR = Code of Massachusetts Regulations
MassDEP = Massachusetts Department of Environmental Protection

B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters." The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that are regulated by this Plan Approval:

Table 7

EU#	Stack Height Above Ground (feet)	Stack Height Above Roof (feet)	Stack Inside Exit Dimensions (inches)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (^{o}F)
EU 1	27	13	22	40	60- 80°F

Table 7 Key:
EU# = Emission Unit Number
^{o}F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.

G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.

H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.

I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.

K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Todd Wheeler by telephone at 413-755-2297, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Marc Simpson
Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: MassDEP/Boston - Yi Tian
MassDEP/WERO – Peter Czapienski
TRC Environmental Corporation - David M. Cotter, PE